The Sagebrush Steppe Fire and Fire Surrogate Study

Joint Fire Science Program

Evaluating the effects of fire and fire surrogate treatments in Sagebrush communities of the Great Basin

The 5-year study applies a common experimental design on 15 sites across the Great Basin. Each site represents a sagebrush/steppe stand at risk of converting to exotic, annual grassland, closed stands of Pinyon pine and/or Juniper.

Oregon State University OSU

University of Idaho

BYU Brigham Young University

ars

University of Nevada Reno

UAS

USGS science for a changing world

Utah State University

The Study Sites

Each Site:
- Is an independent, stand-alone experiment with full replication and control
- Is interdisciplinary, with analyses conducted on individual variables and on interaction among variables

This study is one of a kind:

Network of Sites:
- All sites have the same study design
- Database designed to facilitate meta-analysis at the network level
- Network of scientists work together to design the study, collect data, and analyze results

Economics
Lead: Kim Rollins
Univ. of Nevada-Reno

Wildlife
Lead: Steve Knick
USGS-Boise

Hydrology
Lead: Fred Pierson
ARS-Boise

Vegetation & Fuels
Lead: Steve Bunting
University of Idaho

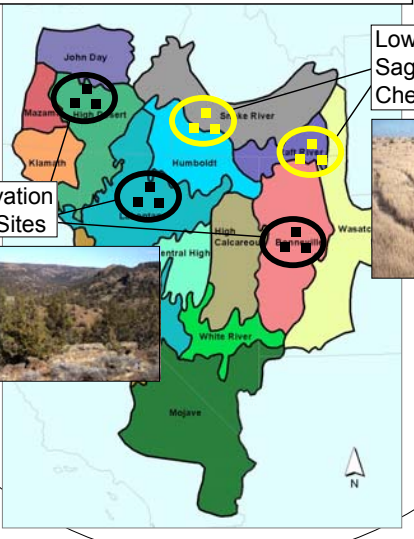
Soils
Lead: Dale Johnson
Univ. of Nevada-Reno

Socio-Political
Lead: Mark Brunson
Utah State University

An ecosystem perspective at the site level

Enhanced by the power of replication at a regional level

The Sage FFS Network



Lower Elevation Sagebrush/ Cheatgrass Sites

Higher Elevation Woodland Sites

For more information please contact
Jim McIver at jmciver@fs.fed.us

The Sage FFS study is…

Long-term
A 5-year, regional study, funded by the Joint Fire Science Program (US Department of Interior and USDA Forest Service)

Collaborative
Scientists and managers, representing federal, state, private, and educational organizations

Integrated and Interdisciplinary
Examines how treatments affect whole ecological systems and how these effects play out in economic and socio-political arenas

Built for Managers
Will help land managers understand the appropriate balance on the use of prescribed fire and "fire surrogates" such as herbicides and mechanical treatments

How it works…

The Sage FFS study will assess the economic, socio-political, and ecological consequences of four fuel alternatives.

- Optional treatments are available to managers.
- Experimental units are similar in size to typical management units.
- Experiment is replicated at the site location and regional levels.
- The information is kept in a common database.

Fire

Herbicide

Mechanical

Untreated Control

The problem…

- One of the most endangered biomes in the US
- Around 1/3 has been lost & as much as 1/2 in the Great Basin
- Both the decrease and increase in fire are attributed to some of the largest vegetation changes

conifer encroachment

Too little fire →

weed invasion

← Too much fire

Information will be provided in many ways…

- Tours
- Website
- Workshops
- User's Guides
- Publications